OBTAINING POLYANILINE COMPOSITES WITH METAL NANOPARTICLES

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Polyaniline (PANI) and its composites with nanoparticles (NPs) of metals are widely used to create electronic devices, nonlinear optics, fuel cells, etc.[1]

An effective method of ultrasonic hydrothermal synthesis was developed and PANI composites with Fe_3O_4[2] NPs (Fig. 1a, b), Fe_2O_3 NPs (Fig.1c) and Ni / Co[3] NPs (Fig. 1d) were obtained, the average aggregate size was 5.5 - 7.5, 3.5 - 4.0 and 2.0 - 2.5 microns, respectively.

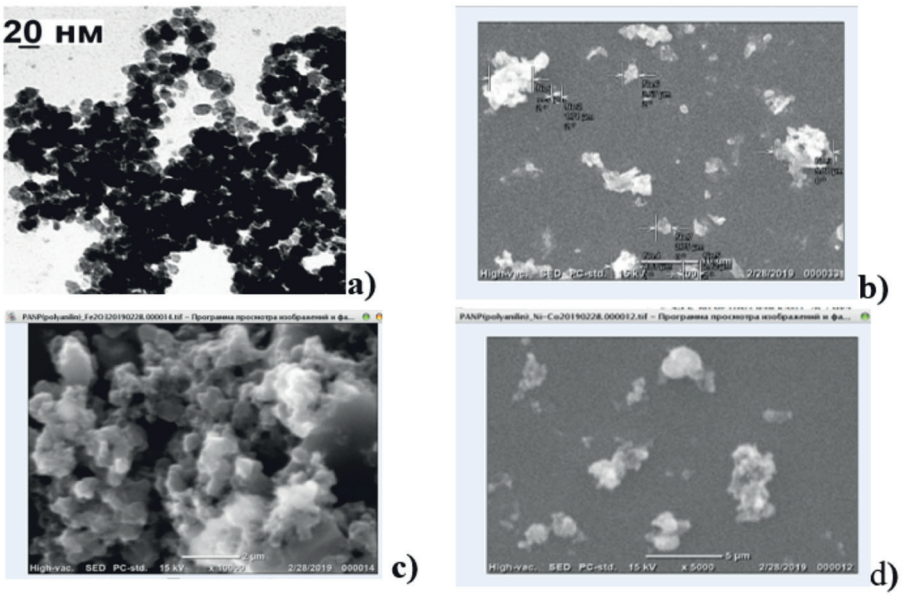

Figure 1. TEM image of magnetite NPs (a), SEM image of composite PANI/NPs Fe_3O_4 (b), PANI/PVP40/NPs Fe_2O_3, (c) PANI/NPs Ni/Co (d).

Literature
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